

Roth Project underfloor heating control system

Wireless control system for underfloor heating.

Roth Project underfloor heating control system is used for individual control and regulation of the room temperature in buildings with underfloor heating systems where a simple but well-functioning system is needed.

The system consists of a controller with 8 channels connected wireless to the room thermostats in the individual rooms. The box has a control panel which is used when pairing the thermostats. At the same time, it provides a good overview of installed thermostats with associated temperatures, and the signal strength can be easily read for each thermostat, which makes it easy to position the thermostat correctly.

The thermostats are available in 2 variants, one thermostat has a small display and touch buttons, the other is a floor temperature sensor which is set via the control panel on the control box.

Room thermostat

Room thermostat with display

The thermostat comes in white with a smaller LCD display protected by a transparent polycarbonate plate. The power supply is 2 x AAA 1.5V batteries. The temperature is easily set with the two touch buttons (+/-). It has programmable time schedules and it is possible to override the entered temperature for a selected number of hours after which the temperature returns to the previous setting. It is also possible to lock the buttons for accidental operation.

Floor sensor

The sensor comes in white without any buttons or display. The front is protected by a transparent polycarbonate plate. The power supply is 2 x AAA 1.5V batteries.

Temperature and min./max settings are made via the control panel on the control box. The sensor can be used as monitoring min./max. temperature of the floor. The sensor must be connected to the same output as a thermostat with display, where you primarily want to regulate according to the room temperature but use the floor sensor as max. thermostat to protect against overtemperature on a wooden floor or to secure a comfort temperature on the floor, f.ex. in the bathroom.

Control box

The control box is available with 8 channels. The box can be mounted directly on the wall, or by using a 35 mm DIN rail (not included). The control box has a potential-free relay for e.g. boiler control, as well as an output for pump with 230V voltage.

The following information can be read on the control panel's control panel per channel:

- > Current and desired temperature
- > Heat demand
- > Signal strength
- > Battery level
- > Pump output status (on/off)
- > Status relay (on/off)
- > Alarm in case of lost connection

The control panel also provides access to basic settings for the system, and with a code for the advanced settings.



First start-up

When first starting up an underfloor heating system, all actuators should be fully opened to ensure proper operation, it is also important to get all air flushed out of the system.

Pump motion

To extend the life of the pump and ensure that the pump does not get stuck, the system automatically performs pump exercise every 10 days for 5 minutes.

Valve motion

Long life and securing of valves and the function of the actuators are ensured by the automatic valve and actuators exercise which is performed every 10 days for 5 minutes.

Sections of functionality

- > Up to 30 m indoor range
- > Frost protection in case of lost connection to thermostats
- > Locking the thermostat for public use
- > On/Off regulation
- > Time schedules (night setback)
- > 7 day timer functionality
- > Can be used for underfloor heating
- > Control of pump, boiler or other heat sources
- > Intuitive operation of thermostat display

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Roth Project controller 8 ch 230V	HVAC no. 7466397008
Supply voltage	230V AC
Energy consumption	6 W
Number of outputs and voltage	22 (NC/NO), 230V AC
Max. sustained load	22 thermal motors (0.3 A)
(3 channels of 4 actuators and 5 channels of 2 actuators)	
Protection class I	(EN60730)
Transmission frequency	868 MHz
Range (up to) 30 m (in ordinary building)	
Max. load pump relay	230V and 0.5 A
Max. load potential-free relay	1A
Power supply cable	85 cm
Ambient temperature	5 - 50°C
Ambient humidity	< 80% RH
Storage/transport temperature	-20 - +50°C
Degree of protection IP20	(EN60529)
Fuse glass fuse WT 6.3A	(5 x 20mm)
Approvals CE	2014/53/EU

Thermostats

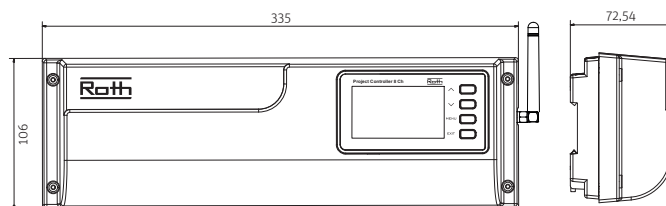
Roth Project wireless room thermostat	HVAC no. 7466397100
Roth Project wireless floor sensor	HVAC no. 7466397200

Supply voltage	2 pcs. AAA 1.5V
Battery life	> 2 years (floor sensor > 4 years)
Power consumption standby	~ 50uA
Room temperature, setting range	+5 - + 30°C
Comfort floor temperature, setting range	+15 - + 30°C
Floor temperature, max. Setting range	+26 - + 35°C
External sensor for floor sensor NTC	10k B = 3435K (2.5m)
Accuracy (resolution)	± 0.5 K.
Time constant (time delay)	Approx. 4 min.
Activation time (wake-up time)	<2 sec.
Max. forced update time for data from control box	10 sec.
Standby display without operation	Max. 5 sec.
Standby by program. at user level	3.5 sec.
Transmission frequency	868 MHz
Range up to	30 m (ordinary building)
Ambient temperature	0 - 55°C
Ambient humidity	Max. 80% RF
Degree of protection IP20	(EN60529)
Approvals CE	2014/53/EU

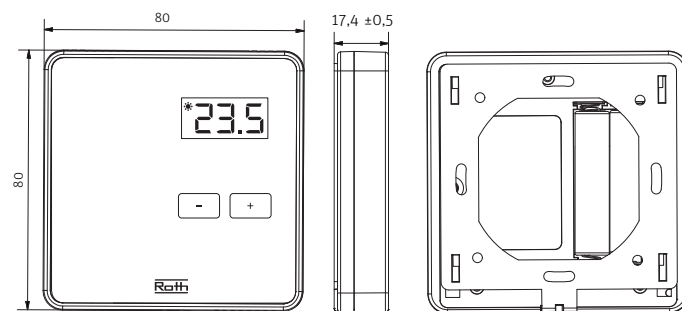
Accessories

Roth Project actuator 230V	HVAC no. 7466275430
Roth Project antenna	HVAC no. 7466397305
Roth Project repeater	HVAC no. 7466397400

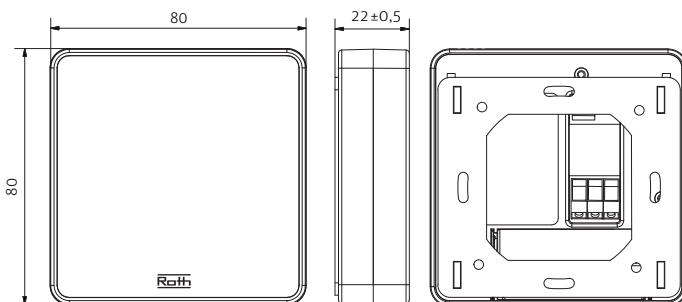
Roth Project controller 8 channels



Roth Project wireless room thermostat with display



Roth Project wireless floor sensor



Connections to controller

